CLAIMS

1. Mashing process, wherein mash is filtered and wort is obtained, characterized in that the mash is fed to the filter material of a dynamic cross-flow filtration system, wort is withdrawn from the side-stream side of the filter material and thickened remainder is withdrawn from the feed side of the filter material.

2. Process according to claim 1 characterized by one or more of the following features:

a. a dynamic cross-flow filtration system with rotating disks or concentrically rotating cylinders or with oscillating disks is used as a dynamic cross-flow filtration system;

b. a material selected from:

- polymer membranes, especially polyamide membranes, PTFE membranes, PVDF membranes, preferably selected from membranes with a retention rate (measured after Pall, Colloid and Surface Science Symposium, Tennessee (1978)) of below 2 μm, more preferably of 1 μm to 0.04 μm, most preferably about 0.1 μm;
- steel;
- nickel; or
- ceramic;

or a combination of two or more of such materials is used as a filter material;

c. a closed, pressurized dynamic cross-flow filtration system is used as a dynamic cross-flow filtration system .

3. Process according to claim 1 characterized by one or more of the following features:

a. the mash used has a reduced husk content, preferably a husk content of 40 to 95% by weight, more preferably a husk content of 50 to 80% by weight, in terms of the husk content in the starting mash as 100% by weight

b. the mash used has starch particles of a grain size of below 100 μm, preferably with a particle size distribution, wherein 99% of the particles have a grain size of below 100 μm, 70% of the starch particles have a grain size of below 65 μm, with a significant portion of the starch particles preferably having a bimodal particle size distribution (determined with a laser diffraction spectrometer; Helossystem, Sympatec) with distinct maxima at about 5 μm and about 25 μm;

c. the mash used is derived from finely ground powder grist;

d. the mash includes modified malts;

e. the mash comprises a mixture of at least two malt flours of different specification.

4. Process according to claim 1 characterized by one or more of the following features:

   a. the operational flow rates, pressures and temperatures are such that a wort flow of 90 to 250, preferably 130 to 200 l/hm^2 is obtained;

   b. the portion of spent grain of the mash is edulcorated accelaratedly by the mash flow dynamic;

   c. when operating, at least two dynamic cross-flow filtration systems (steps) are used in serial order, wherein preferably the first wort is obtained from the first dynamic cross-flow filtration system, while from the second step and possibly from further steps second wort and spent grain are obtained;

   d. filtration is such that the wort obtained is essentially free of particles which are larger than 0.1 μm;

   e. no recycling of the initial feed is applied when operating.

5. Process for the preparation of beer, wherein a mash is filtered, the wort obtained is fermented with yeast and the produced beer is recovered, characterized in that the mash is filtered by means of a dynamic cross-flow filtration system.

6. Process for the preparation of beer according to claim 5, characterized in that a mash is used, which at least partially includes at least one flour having one of the two following particle size distributions A or B:

A. Partially de-husked, pulverized bimodal	B: "Reiter"-grist
100% < 125 µm	99% < 600 µm
80% < 60 µm	80% < 200 µm
60% < 35 µm	75% < 150 µm
40% < 25 µm	60% < 80 µm
20% < 10 µm	40% < 40µm
	20% < 20 µm

7. Use of dynamic cross-flow filtration systems for the filtration of mash.

8. Use according to claim 7, characterized in that a dynamic cross-flow filtration system with rotating disks or with concentrically rotating cylinders or with oscillating disks is used.

9. Use according to claim 7 characterized in that a dynamic cross-flow filtration system is used, wherein the separation material is at least partially a microporous membrane, especially a microporous polyamide membrane, a microporous PTFE membrane or a microporous PVDF membrane, preferably a membrane with a retention rate of below 2 µm, more preferably from 1 µm to 0.04 µm, most preferably of about 0.1 µm.

10. Use of dynamic cross-flow filtration systems as defined in claim 1 for the filtration of mash.

11. Device for the execution of a mashing process according to claim 1 characterized by:

a. at least one vessel for the reception of mash, which is supplied with a heating device provided with a thermostat;

b. a dynamic filtration device for the reception of mash with an inlet for the mash at the feed side of the filter material and a device for the withdrawal of the wort from the side-stream side of the filter material;

c. a device for the transfer of the mash from the vessel to the inlet device of the dynamic filtration device.

12. Device according to claim 11, characterized in that the filter material is selected from:

- polymer membranes, especially polyamide membranes, PTFE membranes, PVDF membranes, preferably membranes which have a retention rate (measured according to Pall, Colloid and Surface Science Symposium, Tennessee (1978)) of below 2 μm, more preferably of 1 μm to 0.04 μm, most preferably of about 0.1 μm;
- steel;
- nickel; or
- ceramic;

or a combination of two or more thereof.

13. Apparatus according to claim 11 , characterized in that the filter material has a retention rate of below 2 μm, more preferably of 1 μm to 0.04 μm, most preferably of about 0.1 μm.

14. Device according to claim 11 , characterized in that the dynamic filtration device has at least one rotating disk and two filter plates in a stationary casing.